

# The “missing middle” – linking decentralized vine multipliers to early generation seed producers

In Ethiopia, Tanzania and Uganda, we are testing business enterprise models for medium-scale seed multiplication to provide the link between up-stream sources of clean seed and new varieties, and downstream community-based multipliers. After undertaking business skills training, 13 medium-scale seed and root enterprises or cooperatives, are operating on a cost share basis.



Fig. 1 Seed multiplication field at Hampo Keble in Humbo, Ethiopia. (credits M. Cherinet)

medium-scale sweetpotato seed (and root) enterprises, to determine if they can be commercially sustainable and act as an interface between the “formal” and decentralized seed systems.

## ► Where and with whom are we working?

In Lake Zone, Tanzania we are working in Geita and Sengerema districts where there is increasing appreciation and willingness to pay for quality seed. In Ethiopia, we are working in the sweetpotato producing woredas (districts) of Sodo Zuria, Hawassa Zuria, Kachabira, Kedida Gamela and Humbo in Southern Nations, Nationalities and Peoples’ Region (SNNPR). In northern Uganda, we are working in Kitgum, Lamwo and Pader districts. We are working with seed entrepreneurs to establish linkages with their agricultural research institutes and private sector tissue culture laboratories as the source of pre-basic seed, with local government extension departments who provide backstopping to the multipliers, and with NGOs promoting sweetpotato, who are important for downstream market linkages.

## ► How are we making it happen?

Careful selection of multipliers ensures that only enterprising ones that are ready to share costs are included. The multipliers contribute up to 40% as an investment in the enterprise (e.g. land, labor, inputs, water pumps and accessories). Other selection criteria include: availability of a permanent water source, land (> two acres), success in adopting new technologies, reputation in the community and access to the market. In Uganda, an initial Rapid Market Assessment study showed that there is high demand for sweetpotato planting material in the target districts and that farmers traveled very long distances to Gulu district (>100km) to purchase planting material.

## ► What is the problem?

There have been considerable investments in different segments of the seed value chain to ensure that farmers can access seed at the right time; however, institutional linkages for the flow of seed along the value chain are weak. When projects end, decentralized vine multipliers (DVMs) have challenges as they may be hundreds of kilometers from the source of new varieties or cleaned up planting material at agricultural research stations. Bridging the gap between up-stream pre-basic seed producers and DVMs producing Quality Declared Seed (QDS) will contribute towards the smooth flow of seed along the chain and enable farmers’ easier access to quality seed.

## ► What do we want to achieve?

We want to test business models for

## Partners

- Tanzania: Lake Zone Agricultural Research and Development Institute (LZARDI)
- Uganda: BioCrops (U) Ltd.,
- Ethiopia: SNNPR Bureau of Agriculture and Natural Resource Department (BoANRD)
- Kachabira, Humbo, Sodo Zuria, Kedida Gamela and Hawassa Zuria Woreda ANRD and Cooperative Offices
- SNNPR Agricultural Inputs Quality Control and Quarantine Authority



Fig. 2 Mr. and Mrs. Lakima in their 1.5 Acre rapid seed multiplication plot in Kitgum, Uganda. (credit G. Kyalo)

In Ethiopia and Uganda, a business skills needs assessment was conducted to guide training content and approach. The seed entrepreneurs were trained in entrepreneurial skills, marketing, preparation of business plans, agronomy and integrated pest management of sweetpotato vine multiplication fields. The seed and root entrepreneurs have developed individual business plans. Mentoring support continues as they implement their business strategies. In Uganda, marketing activities are underway including signboards, brochures and fliers with key messages in local languages. Seed Entrepreneurs participate in local market days, radio talk shows and have also set up demo plots to promote their businesses.

### ➤ What have we achieved so far?

In Ethiopia, we are working with three farmers' cooperatives (48 members, out of which 17% are women), two of which are now legally established. Humbo and Sodo Zuria Cooperative have started vine multiplication on 0.6 ha and 0.8 ha respectively. The cooperative in Humbo woreda has successfully passed two seed inspections with 380,000 cuttings approved by the Agricultural Input Quality Control and Quarantine Authority for quality declared seed (estimated value of USD 3,304) (Fig. 1). However, the attempt to establish seed enterprises at the Farmer Training Centers (FTCs) has not been successful. This is because agronomists who work in the FTCs can benefit from the income generated by the production of market-oriented vegetable crops and therefore prefer to focus on these crops.

In Tanzania, three multipliers (two of which operate as family enterprises and one where the wife is in charge) have constructed a 9 m x 5.5 m screen house for maintaining clean stocks of

planting material. The Tanzania Official Seed and Certification Institute (TOSCI) visited all three sites and gave recommendations for official registration. Currently, the combined revenue of TZS. 978,000 (USD 445) is modest, however, it is expected that this will pick up in the coming season.

In Uganda, 15 (13 male and two female) vine multipliers were trained and established. Two have since focused on root production, but sell some vines; seven are progressing slowly with less than 2 acres under multiplication. Six (all men) have been very successful in establishing their enterprises and are actively involved in seed multiplication and selling. The multipliers are selling both orange and cream-fleshed varieties depending on local demand. By August 2017, these six had established a total of 20 acres of dual-purpose and rapid multiplication plots. The star is Ernest Lapat who established 10 acres of multiplication field and sold over 172 bags of vines worth USD 927 in a period of six months. Vine multipliers in Kitgum, Pader and Lamwo have formed the East Acholi Sweetpotato Growers Association, chaired by Ernest Lapat. Establishment of vine multiplication activities in the three districts of Kitgum (Fig. 2), Pader and Lamwo has solved the problem of lack of planting material in the Acholi sub region. In Uganda, there are indications that the "missing middle concept" can work effectively to replenish stocks and provide the bridge between pre-basic seed producers and DVMs.

### ➤ What's next?

- Expansion of the range of varieties (orange-fleshed and white-fleshed) to cater for different markets;
- Increasing the scale of production to make the seed and root enterprises more profitable;
- Implementation of business plans and calculation of cost benefit analysis in all countries;
- Investment in enhanced marketing strategies to increase sales and strengthen links with institutional customers;
- The seed entrepreneurs will continue to register with the regulatory bodies for seed inspections; however, the land size requirements to meet isolation and rotation practices required by the seed standards is a challenge; and
- Cross-country study to assess successes and challenges of the basic seed production models, and to understand and address gender-based constraints for the "missing middle" basic seed entrepreneurs.

### CONTACT

**Kwame Ogero**  
(CIP-Tanzania),  
K.Ogero@cgiar.org  
**Everina Lukonge**  
(LZARDI),  
elukonge@yahoo.com  
**Gerald Kyalo**  
(CIP-Uganda),  
gerald.kyalo@cgiar.org  
**Mihiretu Cherinet**  
(CIP-Ethiopia),  
M.Cherinet@cgiar.org  
**Margaret McEwan**  
(CIP-SSA)  
M.McEwan@cgiar.org